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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,110	06/25/2004	Hiroshi Matsuoka	1034232-000011	7915
21839 7590 10/03/2007 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER MESH, GENNADIY	
			ART UNIT 1711	PAPER NUMBER
			NOTIFICATION DATE 10/03/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/500,110	MATSUOKA ET AL.	
	Examiner	Art Unit	
	Gennadiy Mesh	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date
:06/25/2004;06/14/2005;12/05/2005.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,4,6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al.(JP 2000-029247).

Nakanishi discloses composition for toner binder comprising, polyester resin contains structural units having polyester structure, structural units derived from styrene resin, structural units derived from epoxy group and structural units derived from polyisocyanate and structural unit derived from wax – see [0005],[0007],[0012], [0013] [0020] and [0023].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al.(JP 2000-029247) as applied to claims 1,4,6 and 7 above, and further in view of Nakanishi et al.(US 6,992,150).

Nakanishi (JP 247) is silent regarding Tg of polyester resin in binder composition. However, Nakanishi (US 150) teaches that polyester resin for binder toner should have Tg in a range from 30⁰ C to 80⁰ C in order to have necessary heat storage stability and low temperature fixing properties (see lines 45 – 52, column 5).

Therefore, it would have been obvious to one of ordinary skill to select polyester resin with Tg in range from 30⁰ C to 80⁰ C per teaching of Nakanishi (US 150) in order to obtain toner binder composition as it disclosed by Nakanishi (JP 247). Regarding limitation related to Molecular weight see Nakanishi (US 150) lines 15 – 45, column 5.

3. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al. (JP 2000-029247) as applied to claims 1, 4, 6 and 7 above, and in view of Hattori (US 5,665,510).

Regarding Claims 2 and 5 Nakanishi (JP 247) discloses that polyester resin can be present in composition in the amount from 10wt.% to 90 wt.% (see [0018]), having Molecular weight in a range from 1000 to 20000 (see [0019]), hydroxyl value of less than 70 mgKOH/g (see [0010]), acid number from 0 to 50 mgKOH/g and from 0.5 to about 2 mole equivalents of isocyanate groups for 1 mole of hydroxyl groups (see [0012]).

Nakanishi (JP 247) is silent regarding about epoxy equivalent of epoxy group containing resin.

However, Hattori teach that toner binder resin (see lines 61 – 68,column 2) comprising polyester and polystyrene modified with epoxy group, wherein epoxy equivalent should be in range from 500 to 20,000 g/eq (see lines 65-67,column 3 and lines 1-9,column 4) and preferably in range from 1000 to 5000 g/eq in order to obtain pulverizable toner with optimized blocking properties.

Therefore, it would have been obvious to one of ordinary of skill to select polystyrene epoxy resin with epoxy equivalent taught by Hattori in order to obtain composition for toner as it disclosed by Nakanishi (JP 247).

Conclusion

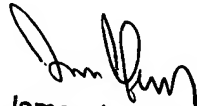
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gennadiy Mesh whose telephone number is (571) 272 2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh
Examiner
Art Unit 1711

GM



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700